

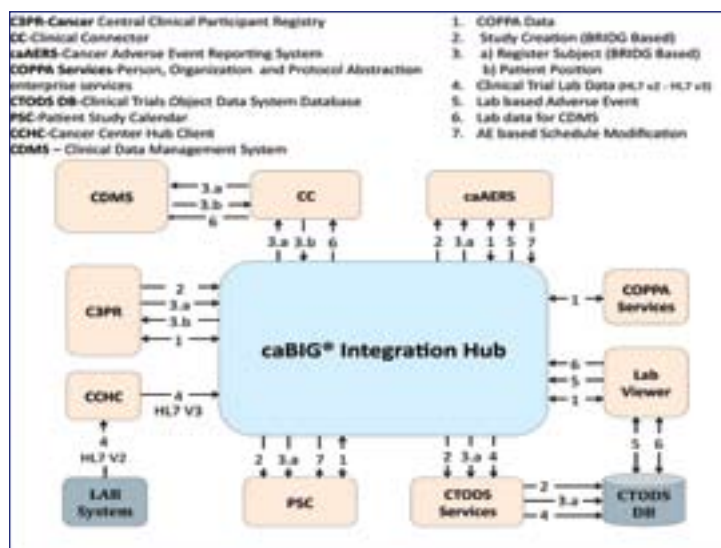
caBIG® Integration Hub

Clinical Trials Workflow Integration

The caBIG® Integration Hub enables tools and applications in the caBIG® Clinical Trials Suite to interface seamlessly with one another, as well as with other compatible systems and applications. This software supports integrated clinical trials workflows and offers users flexible interoperability. For instance, users may use it through the Cancer Center Hub Client application—an integral part of the Integration Hub—to enable the exchange of data from in-house clinical source systems such as clinical chemistry laboratory systems, or with clinical trials systems such as Clinical Data Management Systems (CDMS). Users may view laboratory data in transit between these systems and select subsets to send to the CDMS, or select out-of-range lab results for notifying the caBIG® Adverse Events Reporting System (caAERS) in the Lab Viewer application.

The caBIG® Integration Hub facilitates use of the National Cancer Institute's services-based enterprise architecture. When users select study personnel and participating organizations in any of the caBIG® Clinical Trials Suite applications, they are selecting from a curated global list using NCI Enterprise Services. Through this process, errors and inconsistencies are eliminated, and standards are enforced. The caBIG® Integration Hub is Enterprise Service Bus (ESB)-compliant with the Java Business Integration (JBI) specification and is integrated with caGrid.

The caBIG® Integration Hub is used to create integrated business workflows to link existing applications and databases. The caBIG® Clinical Trials Suite is one example of how this tool is used in clinical trials management, as all caBIG® Clinical Trials Suite applications leverage the caBIG® Integration Hub to transfer information between the applications.



caBIG® Integration Hub – caBIG® Clinical Trials Suite Integration

Categories of Use

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|---|---|--------------------------------------|---|
| <input type="checkbox"/> Biospecimens | <input type="checkbox"/> Data Sharing | <input type="checkbox"/> Imaging | <input type="checkbox"/> Proteomics |
| <input checked="" type="checkbox"/> Clinical Trials Management | <input type="checkbox"/> Genome Annotation | <input type="checkbox"/> Microarrays | <input type="checkbox"/> Translational Research |
| <input type="checkbox"/> Data Analysis & Statistical Tools | <input checked="" type="checkbox"/> Infrastructure | <input type="checkbox"/> Pathways | <input type="checkbox"/> Vocabularies |



Features

- Leverages open-source standards based on Apache Servicemix to facilitate adherence to standards, vendor independence, and collaboration
- Integrates Clinical Connector for generic integration to CDMS vendors such as Oracle Clinical and OpenClinica
- Provides multiple connectivity options by supporting integration standards such as Web services, JEE, JMS, FTP, CSV files, and e-mail
- Provides an extensible and flexible ESB-based architecture using the JBI framework; new JBI components can be plugged in to extend and complement existing features
- Simplifies integration of multiple disparate applications
- Supports multiple eXtended Markup Language (XML) file formats including Biomedical Research Integrated Domain Group (BRIDG) and Health Level Seven (HL7)
- Supports integration with caGrid and non-caGrid environments
- Supports synchronous and asynchronous processing
- Provides reliable messaging, reliable transactions, and high availability, as well as message transformation and notification capabilities
- Meets enterprise-class performance and reliability requirements
- Provides a configurable mechanism for quickly and easily adding and modifying integration scenarios using configuration files

Resources

Tool Overview Page	https://cabig.nci.nih.gov/tools/LabIntegrationHub
Primary Workspace	Clinical Trials Management Systems (CTMS) https://cabig.nci.nih.gov/workspaces/CTMS/
CTMS Knowledge Center	https://cabig-kc.nci.nih.gov/CTMS/KC
CTMS Forums	https://cabig-kc.nci.nih.gov/CTMS/forums
CTMS LISTSERVS	https://list.nih.gov/archives/cabig_ctms_cond_sig.html https://list.nih.gov/archives/cabig_ctms-l.html
caBIG® Tool Inventory	https://cabig.nci.nih.gov/inventory
caBIG® Support Service Providers	https://cabig.nci.nih.gov/esn/service_providers
NCI Center for Bioinformatics Applications Support	ncicb@pop.nci.nih.gov
caBIG® Product Representative	caBIGproductRep@nih.gov

Technical Overview

- Database (MySQL)
- Application container (Tomcat)
- ESB Container (Apache Servicemix)
- caGrid 1.3Services

Other caBIG® Clinical Trials Suite Components

- caBIG® Adverse Event Reporting System (caAERS)
- caBIG® Central Clinical Participant Registry (C3PR)
- caBIG® Clinical Connector
- caBIG® Lab Viewer
- caBIG® Patient Study Calendar (PSC)



NIH Publication No. 10-7532
Updated December 2009